

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
12 August 2004 (12.08.2004)

PCT

(10) International Publication Number  
**WO 2004/067071 A1**

(51) International Patent Classification<sup>7</sup>: **A61M 16/06**

GU14 6QF (GB). **RATHBONE, Thomas** [GB/GB]; 12 Broomleaf Road, Farnham, Surrey GU9 8DG (GB).

(21) International Application Number:  
PCT/GB2004/000352

(74) Agents: **WICKHAM, Michael** et al.; The Boc Group Plc, Chertsey Road, Windlesham, Surrey GU20 6HJ (GB).

(22) International Filing Date: 29 January 2004 (29.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0302196.1 30 January 2003 (30.01.2003) GB

(71) Applicant (for all designated States except US): **THE BOC GROUP PLC** [GB/GB]; Chertsey Road, Windlesham, Surrey GU20 6HJ (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

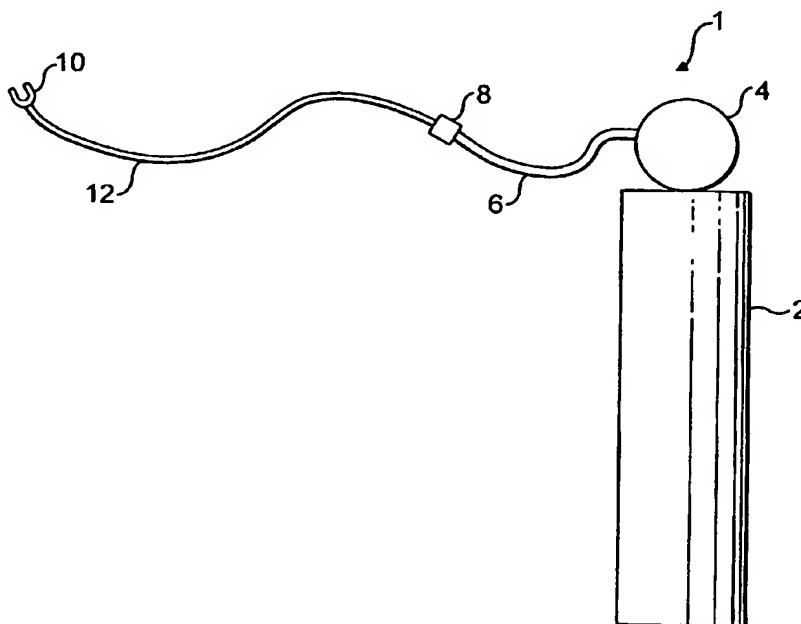
(72) Inventors; and

(75) Inventors/Applicants (for US only): **GARRETT, Michael, Ernest** [GB/GB]; 92 York Road, Woking, Surrey GU22 7XR (GB). **LLOYD, Geoffrey, Morgan** [GB/GB]; Penn Cottage, 17 Church Road West, Farnborough, Hants

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,

[Continued on next page]

(54) Title: NASAL CANNULA



(57) Abstract: A nasal cannula (1) for inclusion in medical apparatus that delivers a breathable gas mixture of helium and oxygen to a patient comprises a length (12) of high pressure narrow bore tubing having a proximal end region for connection to a high pressure source, a cylinder (2), of the breathable gas mixture at a junction (8). The length (12) of tubing has a distal end region connected to at least one nasal administration device (10). The distal end region of the length (12) of tubing has an orifice for the expansion of the breathable gas mixture.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, — *with amended claims*  
ML, MR, NE, SN, TD, TG).

**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*